Sungold®

Cell-level Shadow management technology

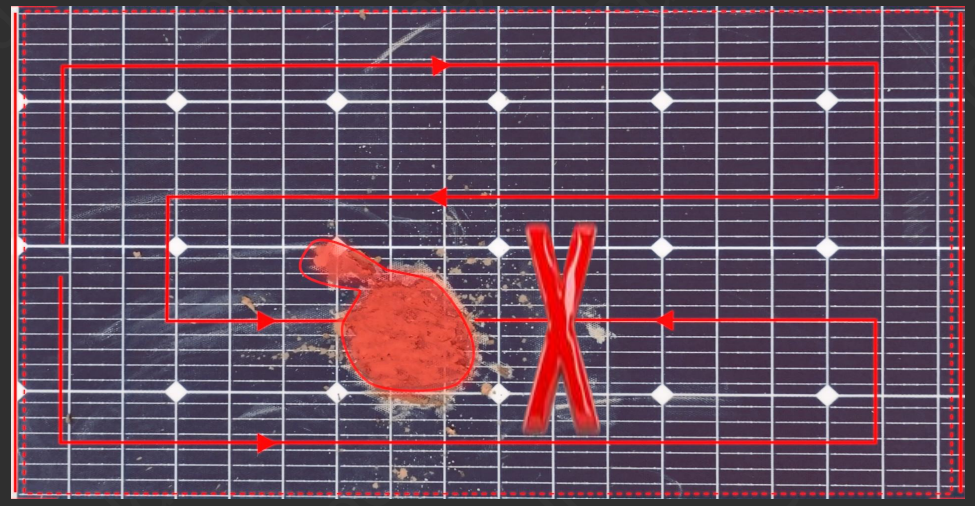
Keep Power Flowing, Even in the Shadows.

Sungold Anti-Shading solar panel

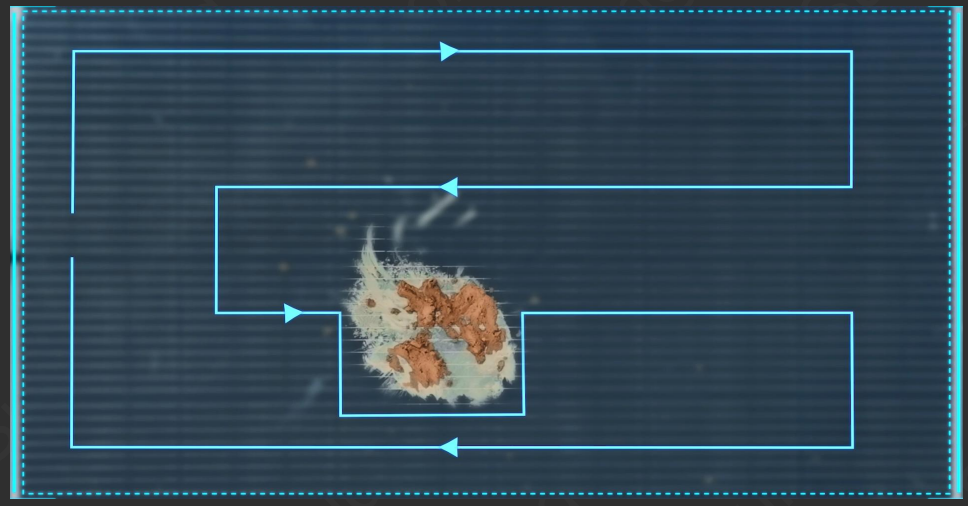
What’s Cell-level Shadow Management Technology?

Sungold integrates **smart current routing elements** within the module to redirect flow away from shaded cells. This minimizes hotspot formation and enhances total energy yield.

When a cell is shaded and its resistance increases, the smart current routing elements within the module activate automatically, redirecting power flow and preventing **overheating** or **energy loss.**



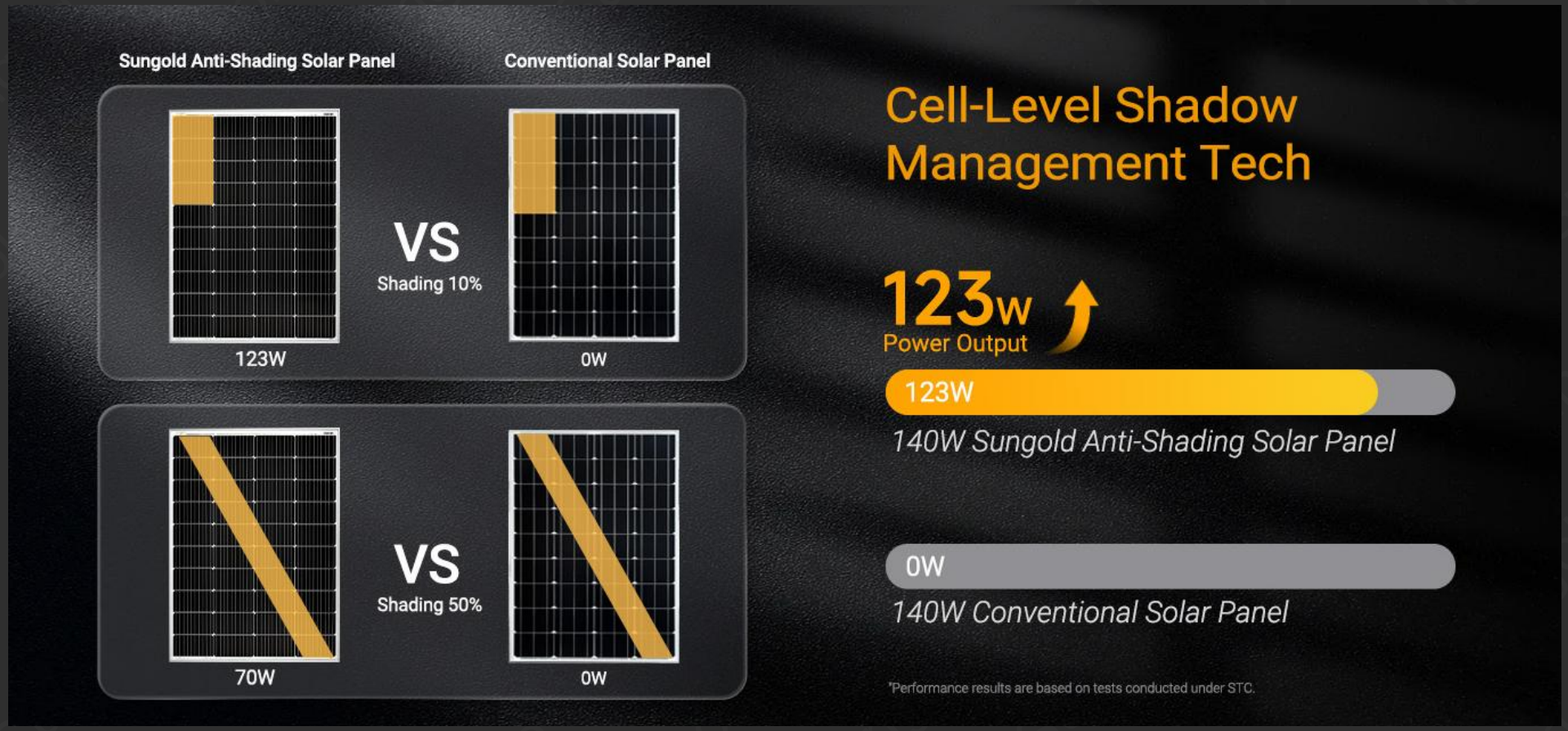
Conventional Panel



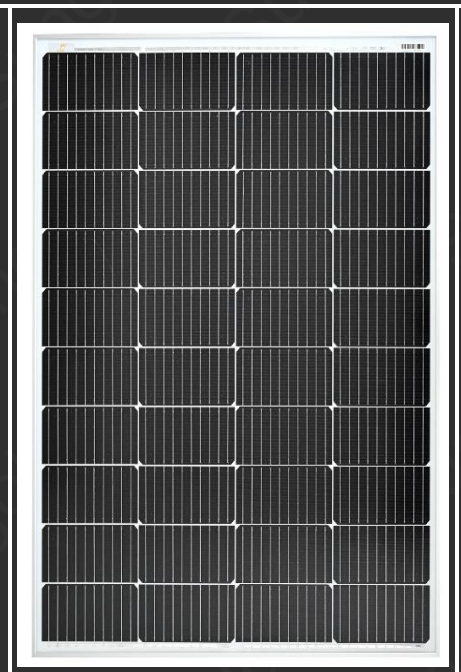
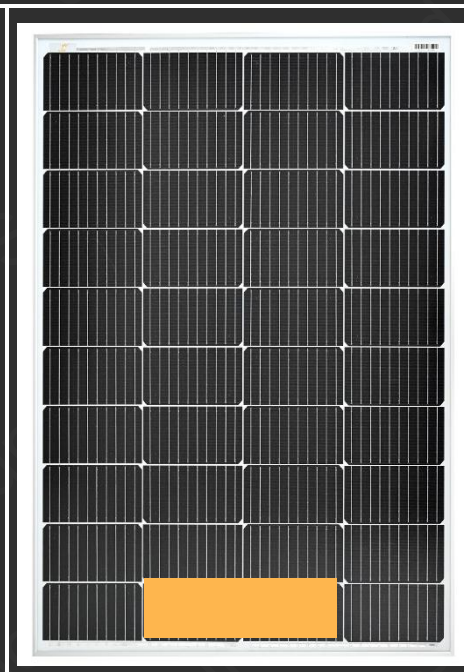
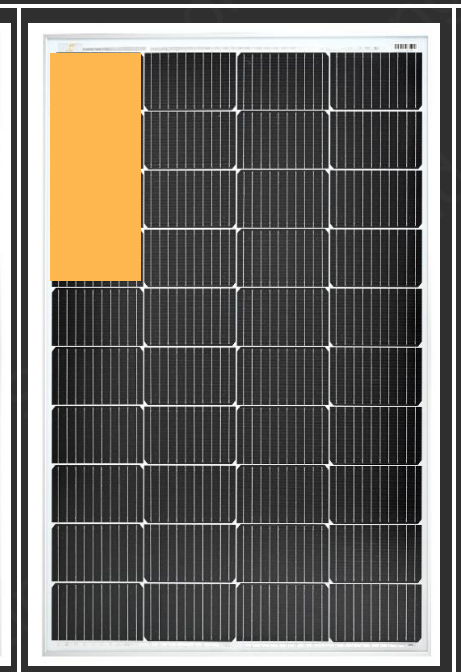
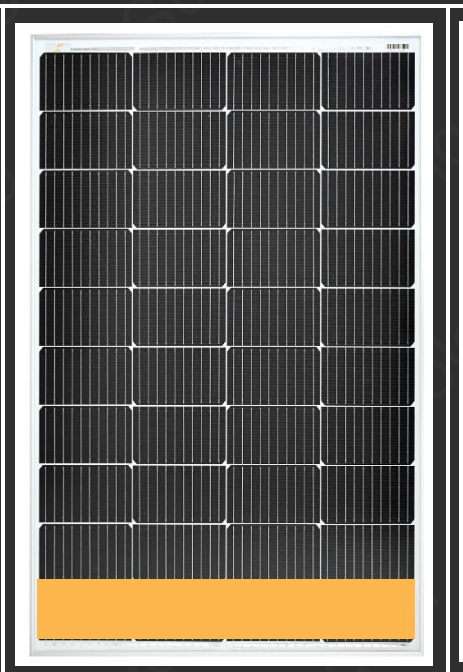
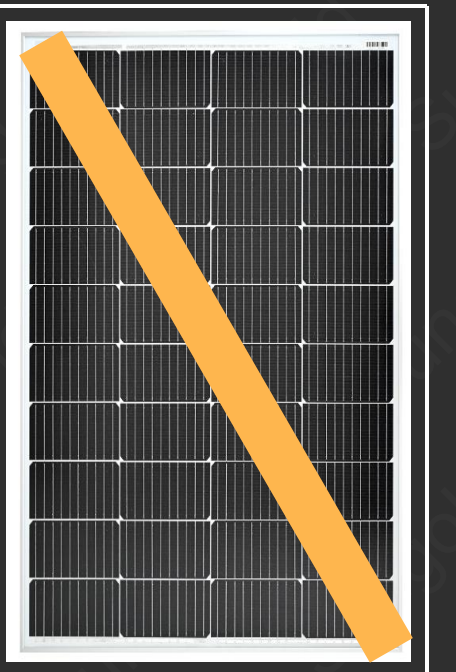
Sungold Anti-Shading Panel

How Does It Optimize Performance?

Each cell adjusts to light conditions independently, ensuring efficient output and minimizing mismatch losses in real-world shading scenarios.

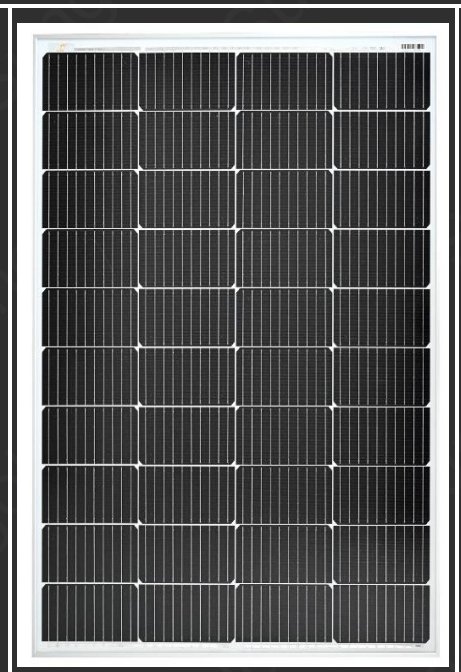
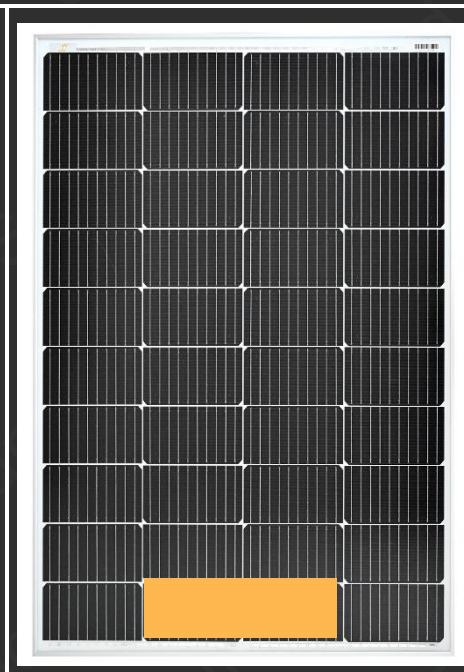
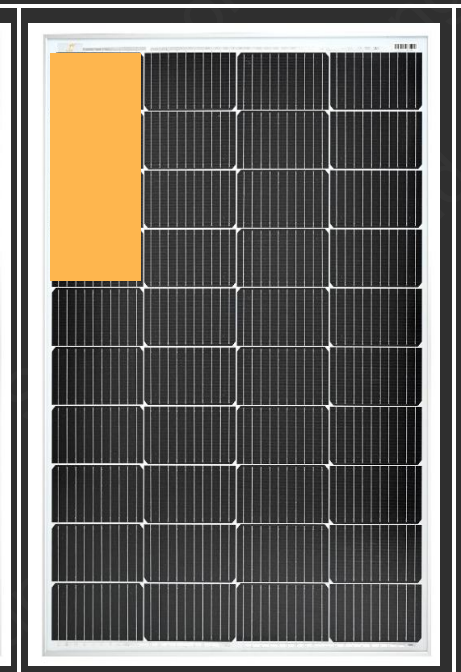
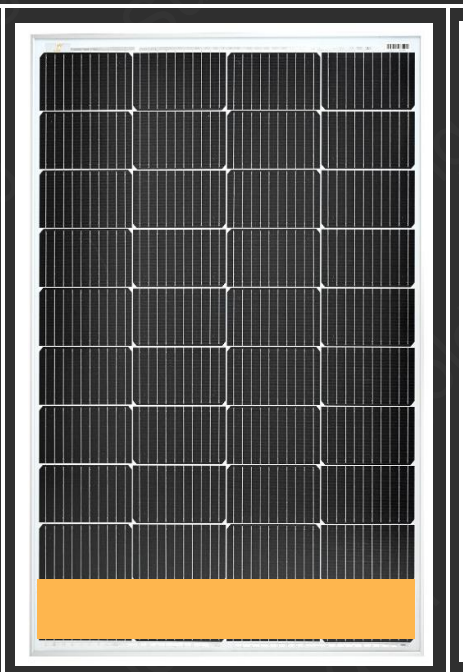
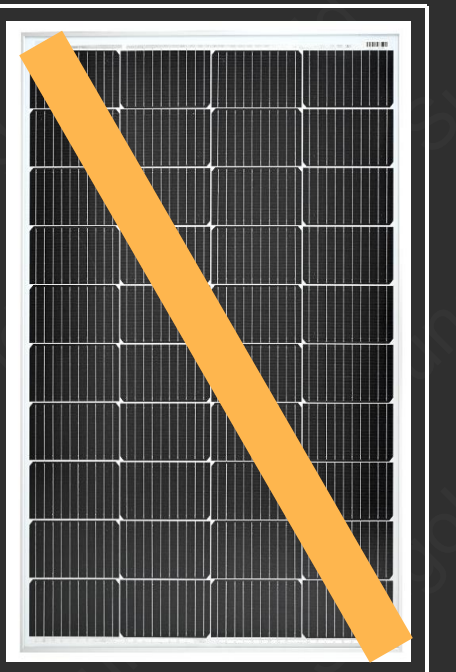


Partial Shading Performance: Sungold vs Conventional Panel

Shading Scenario					
Sungold Output	100%	83%	92%	75%	50%
Conventional Output	100%	0%	0%	0%	0%

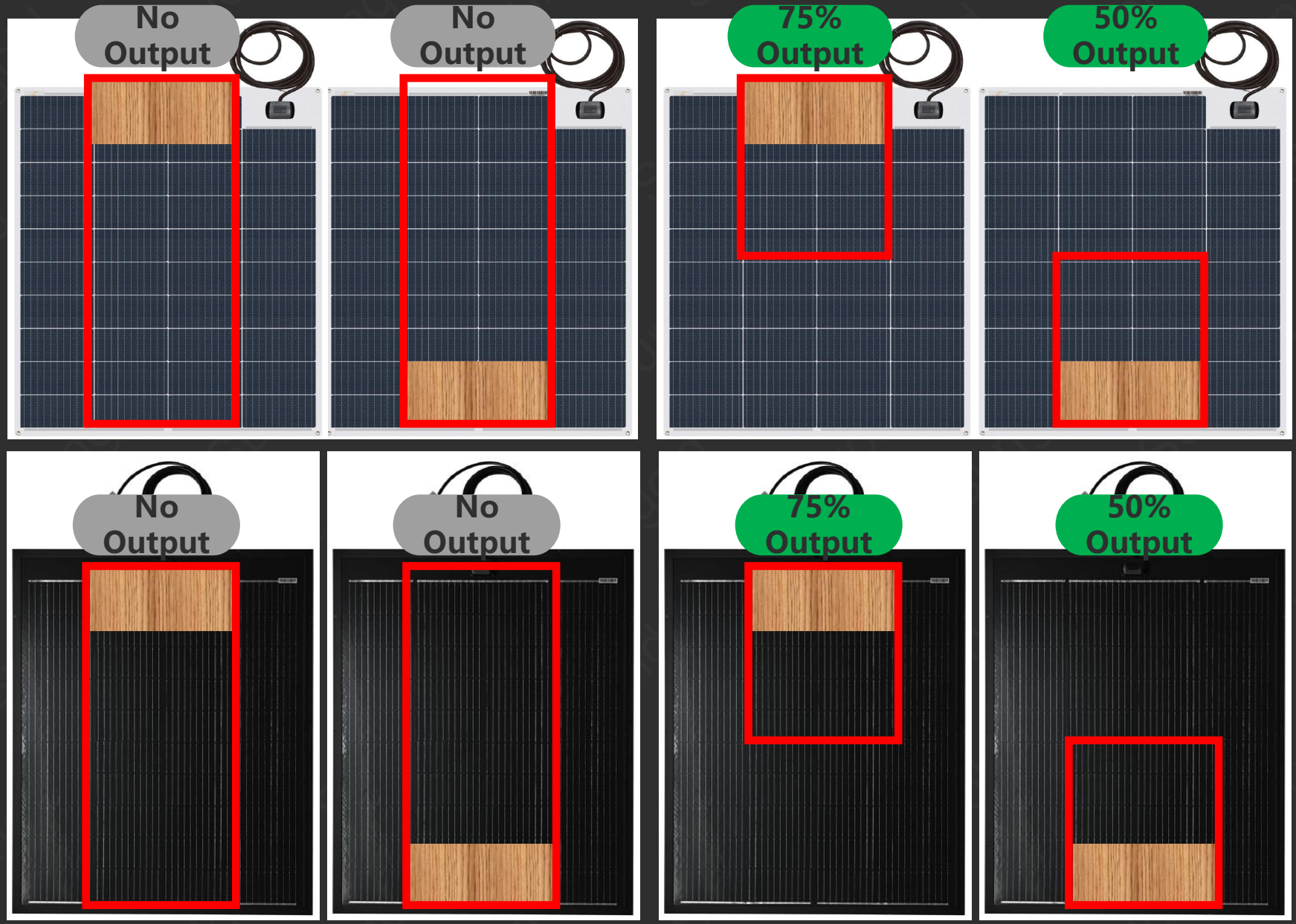
The above data is based on Sungold's **professional-grade 12-zone panel design.*

Partial Shading Performance: Sungold vs Conventional Panel

Shading Scenario					
Sungold Output	100%	75%	75%	50%	50%
Conventional Output	100%	0%	0%	0%	0%

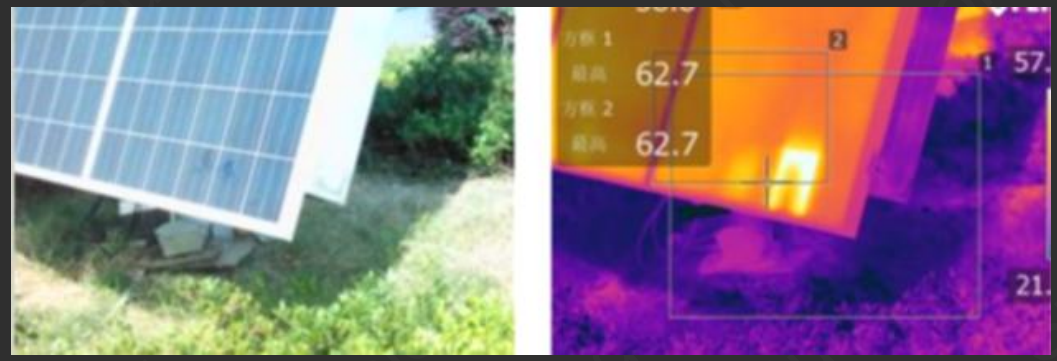
The above data is based on Sungold's **cost-effective 5-zone panel design.*

Conventional Panel VS Sungold Panel



What Causes Energy Loss?

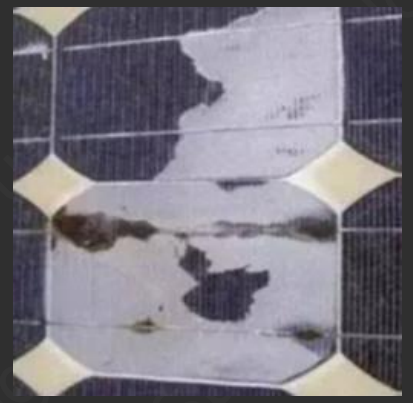
When a solar cell is shaded, it may become a high-resistance load, drawing current from surrounding cells. This leads to localized overheating—known as the **hotspot effect**.



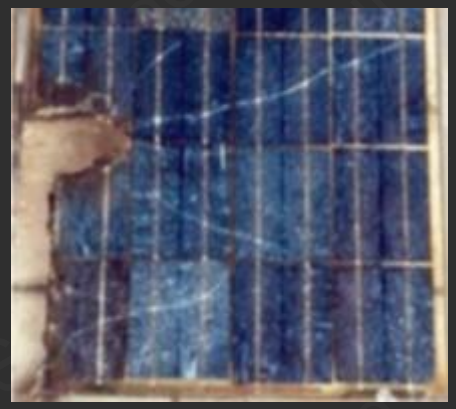
Hotspot Effect: From Power Loss to Safety Risks

Severe localized heating (hotspot)

Burnt backsheet and delamination



Energy loss of up to 100% in the affected section

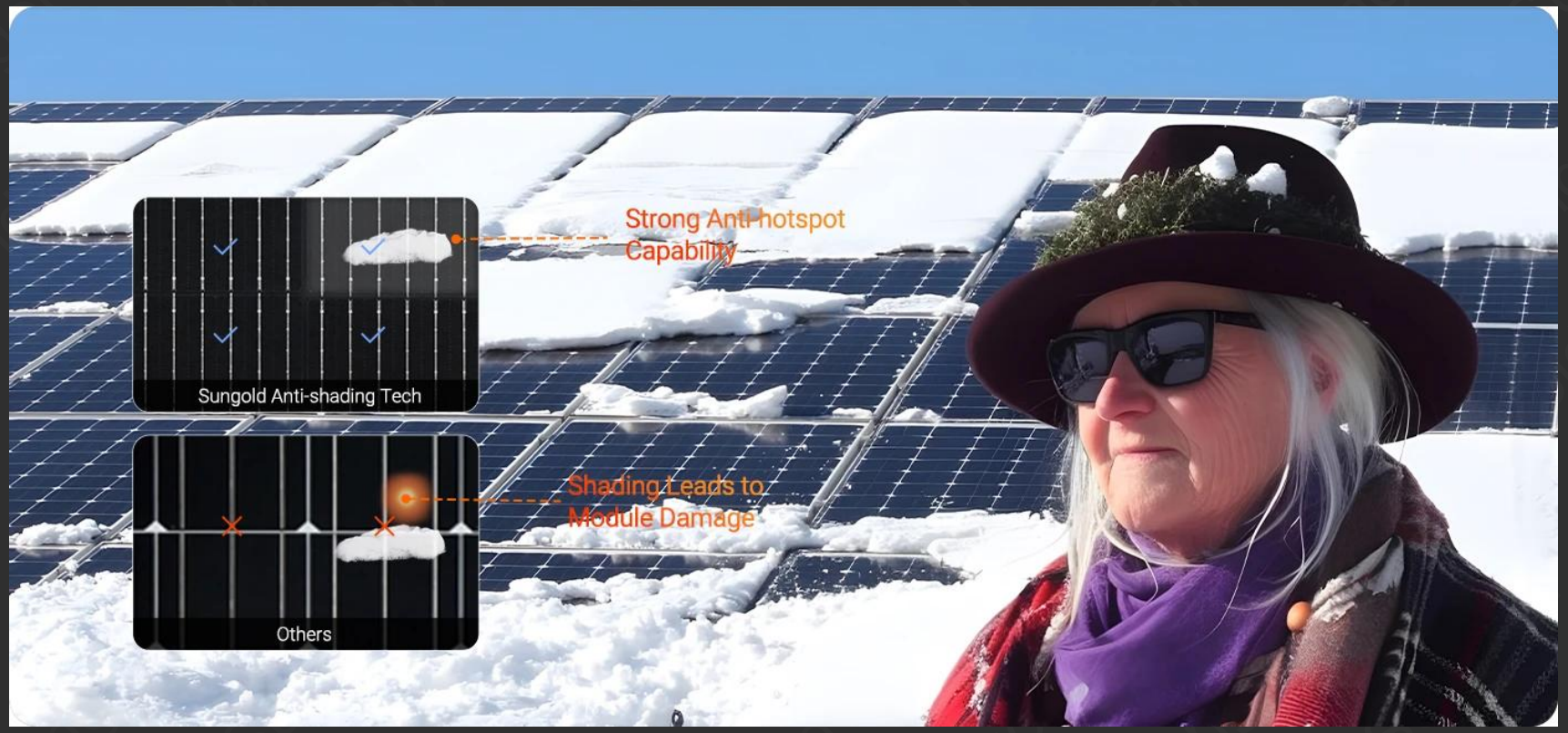


Shortened module lifespan

In extreme cases, fires and other safety risks

How Does Sungold Address The Pain Point?

Sungold's **Cell-level shadow management technology** gives the module strong **hotspot resistance** ability，which avoids localized heat buildup.



For Residential rooftops with trees or chimneys

Pain Point

✗ Obstructions like trees or chimneys reduce module performance.

Sungold Solution

✓ Anti-shading technology:

Precisely manages each cell to reroute current, maximizing energy yield.

For Balconies with railing shadows

Pain Point

✗ Shadows from railings cause partial shading, leading to energy loss.

Sungold Solution

✓ Anti-shading technology:

Built-in smart current paths redirect current around shaded cells, ensuring stable solar output.

For RV rooftops with shifting sunlight angles

Pain Point

✗ Changing sunlight angles cause frequent hotspots.

Sungold Solution

✓ Anti-shading technology:

Integrated smart current routing prevents hotspots and ensures consistent power supply.

For Tourist locations and public transport stations with partial shading

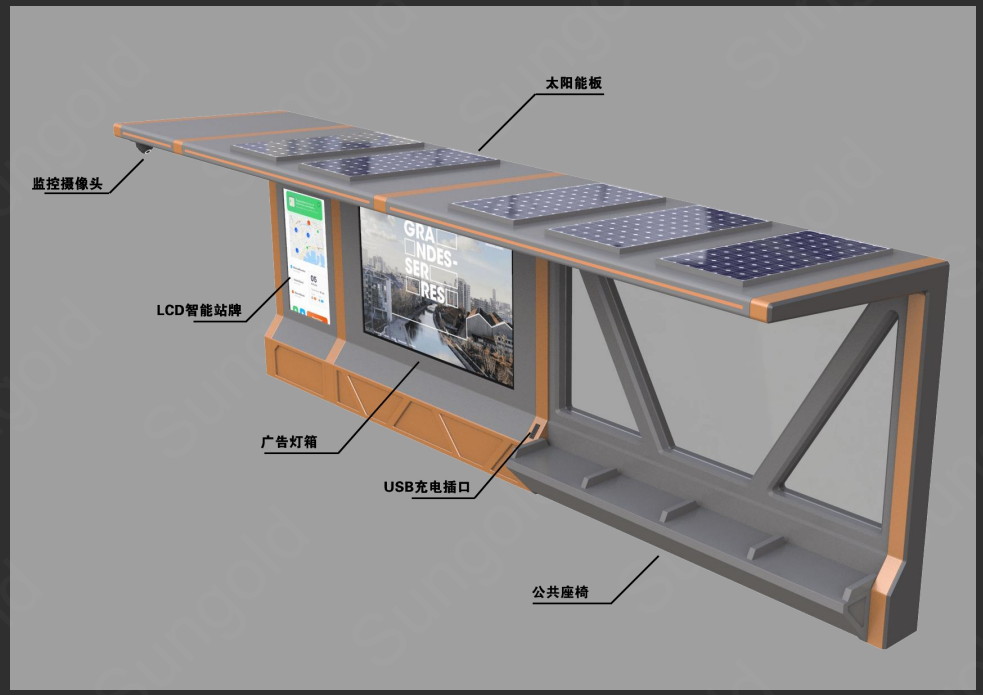
Pain Point

✗ Partial shadow leads to fluctuating system performance.

Sungold Solution

✓ Anti-shading technology:

Smart current redistribution ensures uninterrupted power in dynamic environments.



More energy, less maintenance, longer lifespan

Prevents Hotspot Formation

Smart paths steer current away from shaded cells, avoiding overheating and extending module life.

Enables Flexible Applications

Compatible with thin, flexible panel designs—ideal for complex or mobile setups where others fail.

Improves Overall System Efficiency

Even when partially shaded, modules keep delivering power—boosting efficiency in urban, mobile, or curved installations.

Reduces Power Loss from Shading

Smart circuitry prevents energy drain in shaded zones—keeping output stable and reliable.

Reduces Maintenance & Replacement Costs

Fewer hotspots mean fewer failures, cutting downtime and repair costs over time.

Featured Products with Anti-Shadow Technology

Model	SGSP 120W	SGM2-140W	SG-TF-S-120W	SG-TF-M2-140W	SG-PA621-140W	SG-TF-S-115W	SG-TF-M2-135W	SG-TF-M2-300W
Cell Efficiency	>24.4%	>22.70%	>24.4%	>22.70%	>22.70%	>24.4%	>22.7%	>22.7%
Max Power Voltage	23.3v	23.2V	19.8V	23.2V	23.2V	19.2v	22.6V	46.4V
Max Power Current	6.07A	6.03A	6.07A	6.03A	6.03A	5.99A	5.97A	6.47A
Open Circuit Voltage	19.8v	27.1V	23.3V	27.1V	27.1V	22.6V	26.4V	54.2V
Short Circuit Current	6.42A	6.33A	6.42A	6.33A	6.33A	6.35A	6.27A	6.79A
Cell type	SunPower	Monocrystalline	Monocrystalline	Monocrystalline	Monocrystalline	SunPower	Monocrystalline	Monocrystalline
Weight	6.51KG	8.20KG	2.51KG	2.70KG	4.75KG	2.45KG	2.60KG	5.34KG
Product Size	1060*540*35mm	1000*770*35mm	1070*540*3mm	1020*765*3mm	1133*807*12mm	1050*540*3mm	995*765*3mm	1500*1030*3mm
The maximum system voltage	1000V DC	1000V DC	200V DC	600V DC	1000V DC	200V DC	600V DC	600VDC
Color	White	White	White	White	White	White	White	White

End-to-End Off-Grid Solar Solutions

Sungold has a professional service team that can design off-grid solar solutions tailored to your business needs, from sample testing production and transportation to installation and maintenance, providing one-stop service for your project requirements.

Solar Customizer for SMEs

Energy Tailored, Future Empowered

Sungold is committed to becoming a specialized expert in energy brand customization for small and medium enterprises, focusing on delivering tailored solar energy branding solutions.

Leveraging the advantages of flexible and efficient small-batch customization services, we empower businesses to create distinctive, independent brand identities.

Energy Tailored, Future Empowered

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